

AUGMENTING THE LIQUID WASTE MANAGEMENT SKILLS OF RURAL SHG WOMEN OF MADURAI DISTRICT THROUGH ECO-WASH LITERACY

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ABSTRACT

Wastewater and solid waste generated due to over population, industrialization and urbanization during these days poses serious environmental pollution problems and improper management of these wastes, in turn threatens the human's health. A study was undertaken to impart awareness on scope of water and its demand and problems oriented to the improper management of liquid waste and also to improve the knowledge of the rural women population of selected three blocks views, Thirupurenkundram, Alanganallur and Madurai East block of Madurai district. Based on the questionnaire survey, it has been found that the nearly 50% of the women are unaware of the risks of improper disposal of wastes and diseases spread, due to improper hygiene before the awareness was given. Later, after this study, it has been found that the Eco-WaSH (Water, Sanitation and Hygiene) literacy level of the targeted rural SHG women of the selected 15 villages have raised to 80%.

KEYWORDS: Liquid Waste, SHG Women & Recycling

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INTRODUCTION

The ever-expanding water demand of the world's growing population and economy, combined with the impacts of climate change, are already making water scarcity a reality in many parts of the world, causing severe damage to livelihoods, human health, and ecosystems. By 2030, water demand in India will grow to almost 1.5 trillion m³, whereas, India's current water supply is approximately 740 billion m³. The World Bank estimates that 21% of communicable diseases in India are water related. Widespread unhygienic practices during water collection and storage, poor hand washing and limited access to sanitation facilities perpetuate the transmission of diseases-causing germs through the faecal-oral route. Madurai is the third largest city in Tamil Nadu, with population of 3,041,038 (as per 2011 census). The city is known for the outbreak of waterborne diseases (Navaraj and Krishnammal, 2012). Indian Public Health Association (IPHA) expressed its apprehensions over dengue-related deaths in Madurai district. The analysis of water quality parameters of ground water from the 10 different stations in Madurai, India shows that the pH, electrical conductivity, total hardness, alkalinity, calcium, fluoride, DO and COD values are well within the permissible limit (Balamurugan and Dheenadayalan, 2012). Improper hygiene and sanitation practices among the people and negligence in eradicating mosquito-breeding sources in urban and rural areas was said to be prime reason for dengue flare up in the city. The reason for higher prevalence of these diseases in these blocks may be due to that in all the three blocks, the literacy level in the selected villages was very low. Hence the present study was undertaken to assess the knowledge of the rural women about the

environmental issues and sanitation and also to educate them with the recycling of solid and liquid waste technologies.

METHODS

In all the selected three blocks of the project, intensive questionnaires survey has been made in total of fifteen villages. According to the survey report, in all the fifteen villages, the SHG women were found to be 50% illiterate and was unaware of the problems and diseases outbreak due to unhygienic practices viz, improper hand washing, improper disposal of waste materials. The project helps to focus, not only the targeted SHGs (direct beneficiaries) but also the nearby village women who will be gathering the basic knowledge on health related problems that rises due to unhygienic water usage practices. Questionnaire was prepared for collecting the basic details of the SHG women and based on the information collected, awareness cum training programme was given to disseminate the solid and liquid management technologies. The selected 15 villages viz, Achampatti, Perurseri, Vavadaimaruthur, Kuravankulam, Mettupatti, of Alanganallur block ; Kodikulam, Auyilangudi, Mangulam, Meenakshipuram, Narasingam, of Madurai East block; Vadapalnji, Sakkilipatti, Pudukulam, Karadipatti, Periyaalankulam of Thiruparankundram blocks were targeted for providing the awareness programme during the period from 2014 -2016. All the survey, awareness cum training program were conducted in the selected 15 villages of Madurai district.

RESULTS AND DISCUSSIONS

Questionnaire Survey

Intensive questionnaire survey was made to assess the knowledge of rural women population in 15 villages of three blocks viz, Thiruparankundram, Alanganallur & Madurai east. The questionnaire comprises 50 questions. Apart from their basic information, maximum of the questions were related to the water demand, scope and importance of water, reuse of water, future fate of water in the world scenario. All the targeted rural women population was very much co-operative in collecting the information. Based on the survey, it has been recorded that nearly 50% of the rural women were unaware of importance and future threaten and demand of water.

Awareness Program

Awareness program on health risks due to unhygienic water usage, future water demand and its scope was given to the targeted rural women population of Madurai district through power point presentations, displaying color posters and charts depicting the hygienic practices and importance and reuse of water. The targeted women populations were informed about the problems & issues related to sanitation & unhygienic practices. Importance of rainwater harvesting was also imparted to the targeted people. The whole villages were very attentive & co-operative in learning and gaining knowledge. Global hand washing day was celebrated for the Government school children of the Narasingham Village on 15.10.2015. Stage drama organized to know about the importance of hand washing day was outstanding. Demonstration on the steps involved in hand washing was so informative & useful for the school children & targeted SHGs. Nearly 250 children and 50 SHGs women were participated and got benefitted in the global hand washing program. Post survey conducted in the villages revealed that the Eco-WaSH literacy was raised to 80% from 50%.

Recycling of Wastewater - Training Program

In general, all the household wastewater generated was not used by the rural women before the training program was imparted to them. Nearly 50-100 liters of wastewater was generated from each household on daily basis without any usage. The importance of water was emphasized and demonstration program on wastewater reuse and recycling through

kitchen garden was given to the rural women of 15 villages. Total of 600 rural SHG women i.e., 40 nos in each of 15 villages was benefitted. Sujeetha *et al.* (2015) also reported that the tribal self-help group women has positive approach in their participation and involvement in social developmental activities

Among all the selected three blocks viz., Thirupurrenkundram, Alanganallur and Madurai East block, the villagers had a positive remarks and the percentage of improvement in the liquid waste management skills of rural women of five villages in Alanganallur block. Achampatti village of Alanganallur block had a very significant response compared to the other villages like Perurseri, Vavadaimaruthur, Kuravankulam, Mettupatti. The remaining two blocks namely, Thirupurrenkundram and Madurai East also had a very substantial response and behavioral change and also their knowledge on recycling of solid waste got increased.

CONCLUSIONS

From the results of the study, it has been concluded that the targeted rural SHG women of Madurai district have improved their knowledge on importance of water, scope and demand of water, rainwater harvesting and hygienic practices in water usage. It was also revealed that the rural SHG women have raised to 80% from 50% in their Eco-WaSH literacy level. The targeted women was also benefitted due to the recycling of liquid waste and its utilization for kitchen gardening and thereby improving their economic level.

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REFERENCES

1. Navaraj P.S. and Krishnammal. S. (2012). *Evaluation of water quality and its quotient factor in Therkuthuru village, Madurai, India. Journal of Environmental Science and Water Resources.* 1(9), 216 – 222.
2. Balamurugan, C and Dheenadayalan, M.S. (2012). *Studies on the quality of groundwater in Madurai, Tamilnadu, India. Journal of Chemical and Pharmaceutical Research.* 4(3):1632-1637
3. Sujeetha, T.N. Ravichandran, V and Karuna Jeba Mary, M.V.(2015). *Participation of Self-help group tribal women in Economic and social developmental activities. Journal of Extension Education* 27 (1), 5398 – 5400

